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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CURS, NATHAN M

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/036,538	<b>Applicant(s)</b> ONO ET AL.	
	<b>Examiner</b> Nathan Curs	<b>Art Unit</b> 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Wolf (US Patent No. 6741812).

Regarding claim 1, Wolf discloses a wavelength multiplexing apparatus comprising: a multiplexing section for multiplexing and/or demultiplexing optical signals to/from a wavelength-multiplex signal transferred through an optical multiplex transmission line, the optical signals having different wavelengths from each other and being individually transmitted or received by a plurality of signal conversion apparatuses (col. 2, lines 31-36 and 48-60); a reference signal receiving section for receiving a reference optical signal modulated according to a reference signal which is outputted from a specific one of said plurality of signal conversion apparatuses, and is a reference to synchronization in all or a part of said plurality of signal conversion apparatuses (col. 2, lines 45-47 and col. 3, lines 6-18); and a reference signal distributing section distributing the received reference optical signal to all or a part of said plurality of signal conversion apparatuses through transmission lines respectively formed between each of the plurality of signal conversion apparatuses and the reference signal distributing section (col. 2, lines 3-8).

Regarding claim 3, Wolf discloses the wavelength multiplexing apparatus according to claim 1, wherein: said reference signal receiving section receives reference optical signals individually supplied from a plurality of specific signal conversion apparatuses among said plurality of signal conversion apparatuses (col. 2, lines 20-27); and said reference signal distributing section distributes one of the reference optical signals received by said reference signal receiving section (col. 2, lines 3-8).

Regarding claim 4, Wolf discloses the wavelength multiplexing apparatus according to claim 1, wherein; said reference signal receiving section receives reference optical signals which are individually supplied from a plurality of specific signal conversion apparatuses and have a correspondence in advance with all or a part of said specific signal conversion apparatuses and said optical multiplex transmission line (col. 2, lines 20-27 and col. 3, lines 51-63); and said reference signal distributing section distributes the individually received reference optical signals to said signal conversion apparatuses corresponding to the reference optical signals or said optical multiplex transmission line (col. 2, lines 3-8).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US Patent No. 6741812) in view of Endriz et al. ("Endriz") (US Patent No. 5657153).

Regarding claim 2, Wolf discloses the wavelength multiplexing apparatus according to claim 1, but does not disclose that said specific one of said plurality of signal conversion

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apparatuses wavelength-multiplexes said reference optical signal to an optical signal to be transmitted from the specific signal conversion apparatus and that said reference signal receiving section receives said reference optical signal by demultiplexing or extracting said reference optical signal from said optical signal in wavelength region. Endriz discloses an amplifier for a WDM system where a signal is converted from electrical to optical and then wavelength multiplexed as part of an amplifier pump signal, and demultiplexed at the received end, to provide communication using the amplifier pump signal (col. 1, lines 23-32 and col. 4, line 7 to col. 5, line 17). It would have been obvious to one of ordinary skill in the art at the time of the invention to transmit the synchronization signals between the nodes of Wolf by modulating WDM amplifier pump signals, as taught by Endriz, to overcome the limitation of denied switching of synchronization wavelengths in Wolf.

Regarding claim 6, Wolf discloses a wavelength multiplexing apparatus comprising: a multiplexing section for multiplexing and/or demultiplexing optical signals to/from a wavelength-multiplex signal transferred through an optical multiplex transmission line, the optical signals having different wavelengths from each other and being individually transmitted or received by a plurality of signal conversion apparatuses (col. 2, lines 31-36 and 48-60); a reference signal receiving section for receiving a reference optical signal modulated according to a reference signal which is outputted from a specific one of said plurality of signal conversion apparatuses, and is a reference to synchronization in all or a part of said plurality of signal conversion apparatuses (col. 2, lines 45-47 and col. 3, lines 6-18); and a reference signal distributing section distributing the received reference optical signal to all or a part of said plurality of signal conversion apparatuses through transmission lines respectively formed between each of the plurality of signal conversion apparatuses and the reference signal distributing section (col. 2, lines 3-8). Wolf does not disclose that said multiplexing section includes an optical amplifier

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optically amplifying a wavelength-multiplex signal transferred through said optical multiplex transmission line and all or a part of optical signals demultiplexed from the wavelength-multiplex signal and that said reference signal distributing section distributes said received reference optical signal by modulating pumping light to be used for said optical amplifying, by the reference optical signal. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Endriz with Wolf as described above for claim 2.

### ***Response to Arguments***

5. Applicant's arguments filed 17 April 2006 have been fully considered but they are not persuasive.

The applicant argues that claim 1 differs from Wolf in that the plurality of signal conversion apparatuses with the reference signal receiving section are element within the wavelength multiplexing apparatus. However, Wolf discloses a plurality of signal conversion apparatuses with the reference signal receiving section as elements within wavelength multiplexing apparatus (see fig. 2, which shows a portion of a Wolf network element – i.e. a wavelength multiplexing apparatus – where the E/O and O/E modules are signal conversion apparatuses and the reference signal receiving section is the O/E corresponding to the wavelength used for the sync signal).

The applicant also argues that in claim 1, only the multiplexing section is connected to the wavelength-multiplexing transmission line, and not the signal conversion apparatuses, reference signal receiving section and reference signal distribution section. Inasmuch as the applicant's signal conversion apparatuses, reference signal receiving section and reference signal distribution section which are indirectly connected to the wavelength-multiplexing transmission line by way of the multiplexing section can be called "never connected to the

wavelength-multiplexing transmission line", then only the multiplexing section, Wolf fig. 2 element C1, is connected to the wavelength-multiplexing transmission line, and not the other elements to the left of element C1 in Wolf fig. 2. Therefore, Wolf reads on the claim.

The applicant also argues that contrary to Wolf, the applicant's has reference optical signals distributed in parallel to all or part of the plural signal conversion apparatuses. However, the applicant only claims "transmission lines", and does not claim that these are optical lines, between the reference signal receiving section and the plural signal conversion apparatuses. Further, col. 2, lines 3-8 of Wolf discloses that the receive-side sync-wavelength signal conversion apparatus provides the received sync signal to "all interface units" of the network elements receiving the sync wavelength. This is a disclosure of parallel distribution of the sync signal over inherent transmission lines to the plural signal conversion apparatuses.

In general response to applicant's arguments that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., parallel optical distribution lines within the apparatus, not synchronizing between nodes) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

Further, the applicant's arguments that the applicant's apparatus achieves low cost, flexibly satisfies demands for office establishment, etc. are not relevant to whether or not Wolf reads on the claimed structure.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Conclusion***

7. Any inquiry concerning this communication from the examiner should be directed to N. Curs whose telephone number is (571) 272-3028. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached at (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (800) 786-9199.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pairedirect.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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